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October 30, 2017

VIA ELECTRONIC FILING

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, South Carolina 29210

RE: Annual Review of Purchased Gas Adjustment and Gas Purchasing
Policies of South Carolina Electric & Gas Company
Docket No. 2017-5-G

Dear Ms. Boyd:

Enclosed for filing is a clean version of Corrected Direct Testimony and Exhibits of Rose M. Jackson. Also enclosed is a redlined version of the Corrected Direct Testimony and Exhibits showing the corrections which were made on page 4 and to Exhibit No. ___(RMJ-1).

By copy of this letter, we are providing the South Carolina Office of Regulatory Staff with a copy of the clean and redlined Corrected Direct Testimony and Exhibits of Rose M. Jackson and attach a certificate of service to that effect.

If you have any questions or concerns, please do not hesitate to contact us.

Very truly yours,

Matthew W. Gissendanner

MWG/kms

Enclosures

cc: Jenny R. Pittman, Esquire
Shannon Bowyer Hudson, Esquire
Dawn Hipp

(all via electronic mail and U.S. First Class Mail w/enclosures)

**CORRECTED DIRECT TESTIMONY OF
ROSE M. JACKSON
ON BEHALF OF
SOUTH CAROLINA ELECTRIC & GAS COMPANY
DOCKET NO. 2017-5-G**

1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.**

2 A. My name is Rose M. Jackson, and my business address is 1300 12th Street,
3 Suite F, Cayce, South Carolina. I am employed by SCANA Services, Inc.
4 ("SCANA Services") as General Manager – Supply & Asset Management.

5
6 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND BUSINESS**
7 **BACKGROUND.**

8 A. I graduated from the University of South Carolina in 1988 with a Bachelor
9 of Science degree in Accounting. Following graduation, I worked for approximately
10 three (3) years as an accountant for a national security services firm. In 1992, I
11 began my employment with SCANA Corporation ("SCANA") as an accountant
12 working directly for SCANA Energy Marketing, Inc. Over the years, I have held
13 varying positions of increasing responsibility including Energy Services
14 Coordinator, where I was responsible for scheduling gas for the Atlanta Gas Light
15 System; project manager for the implementation of an automated gas management
16 system; and Manager of Operations. In 1998, I became responsible for gas
17 procurement, interstate pipeline and local distribution company scheduling and
18 preparation of gas accounting information. In May 2002, I became Manager of

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2 gas scheduling on interstate pipelines and gas accounting for all SCANA
3 subsidiaries. In November 2003, I became Fuels Planning Manager where I assisted
4 all SCANA subsidiaries with strategic planning and special projects associated with
5 natural gas. I held this position until promoted to my current position in December
6 2005.

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8 **Q. WHAT ARE YOUR DUTIES AS GENERAL MANAGER – SUPPLY & ASSET**
9 **MANAGEMENT?**

10 A. In regard to South Carolina Electric & Gas Company (“SCE&G” or the
11 “Company”) concerning this proceeding, I am responsible for gas supply and asset
12 management functions. Specifically, my responsibilities include the oversight of
13 planning, procurement of supply and capacity, nominations and scheduling, gas cost
14 accounting, state and federal regulatory issues concerning supply and capacity, and
15 asset and risk management.

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18 A. The purpose of my testimony in this docket is two-fold. First, I discuss
19 SCE&G’s portfolio of gas supply, addressing the various gas supply and
20 transportation options available to the Company. Second, I discuss the state of the
21 natural gas market during the period of August 1, 2016, to July 31, 2017 (“Review
22 Period”).

I. GAS SUPPLY

Q. PLEASE EXPLAIN THE GAS SUPPLY OPTIONS CURRENTLY AVAILABLE TO SCE&G.

A. There are three gas supply options that are available to SCE&G: (1) wellhead gas supply, (2) underground storage, and (3) liquefied natural gas ("LNG"). SCE&G's gas asset portfolio includes each of these supply options, and the Company has combined these supply options with interstate transportation to meet its firm demand under varying weather conditions at reasonable cost.

Q. PLEASE DESCRIBE THE AVAILABLE INTERSTATE PIPELINE TRANSPORTATION OPTIONS.

A. SCE&G purchases interstate pipeline transportation capacity on both a firm and interruptible basis from the three (3) interstate pipelines that provide service to SCE&G: Southern Natural Gas Company ("Southern"), Transcontinental Gas Pipe Line Corporation ("Transco"), and Dominion Energy Carolina Gas Transmission ("DECGT").

Interstate Firm Transportation ("FT") service permits SCE&G access to interstate pipeline transportation capacity on a priority basis. Interruptible Transportation ("IT") service is only available when FT customers, such as SCE&G, are not using their FT capacity. IT service is curtailed when FT customers use their capacity. In sum, FT and IT services use the same physical pipeline capacity, with FT service having priority. SCE&G contracts for FT service from the three

1 interstate pipelines serving South Carolina to ensure delivery of natural gas during
2 colder periods when the full transportation capacity of these pipelines is used and
3 when the demand for natural gas service is typically greatest. SCE&G currently
4 holds 161,144 dekatherms ("Dt") of firm capacity on Southern and 70,458 Dt of
5 firm capacity on Transco. In addition, as of the beginning of the winter heating
6 season on November 1, 2017, SCE&G will have 344,929 Dt of firm capacity with
7 DECGT in order to deliver gas from Transco and Southern and from SCE&G's in-
8 state LNG facilities to SCE&G's system and anticipates an additional 50,000 Dt of
9 firm capacity on DECGT, which DECGT has projected to be in-service by
10 December 23, 2017. Corrected Exhibit No. __ (RMJ-1) provides a summary of the
11 firm transportation contracts by pipeline supplier.
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7 between SCE&G's Electric and Gas Departments on October 31, 2016. However,
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9 capacity on an interruptible basis as conditions warrant. The MOU also allows the
10 departments to allocate transportation capacity; therefore, the Gas Department
11 continues to have access to 27,000 Dt in Zone 1 of the DECGT system.

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13 **Q. WHAT INTERSTATE STORAGE ASSETS ARE AVAILABLE TO THE**
14 **COMPANY TO AID IN DELIVERING RELIABLE AND SECURE GAS**
15 **SERVICE TO SCE&G CUSTOMERS?**

16 A. The Company currently has 4,908,848 Dt of storage capacity on Southern's
17 system, with maximum daily withdrawal capability from this storage equaling
18 99,121 Dt per day at peak storage inventory. On Transco, SCE&G subscribes to
19 593,735 Dt of storage capacity, with a maximum withdrawal quantity of 19,789 Dt
20 per day at peak storage inventory. Exhibit No. ____ (RMJ-2) reflects total storage
21 and withdrawal capacity by pipeline supplier in a table format.

1 **Q. PLEASE DESCRIBE THE LNG FACILITIES AND THEIR CAPACITIES.**

2 A. SCE&G owns and operates two LNG facilities: one at Bushy Park near
3 Charleston which can liquefy and store up to 980 million cubic feet ("Mmcf") of
4 LNG, and the other at Salley in Orangeburg County, which can store up to 900
5 Mmcf of trucked-in LNG. LNG must be transported to Salley via truck because
6 Salley has no liquefaction facilities.

7
8 **Q. AT WHAT VAPORIZATION RATE CAN SCE&G USE THESE**
9 **FACILITIES?**

10 A. The combined storage capability of these facilities allows our system
11 throughput planning to assume a maximum daily withdrawal quantity of 105
12 Mmcf/day. For example, assuming that storage volumes are at maximum capacity,
13 Bushy Park's inventory would be exhausted in approximately 16 days if operated at a
14 withdrawal rate of 60 Mmcf/day, and Salley's inventory would be exhausted in
15 approximately 20 days if operated at a withdrawal rate of 45 Mmcf/day.

16
17 **Q. WHAT BENEFIT DO THESE LNG ASSETS PROVIDE THE COMPANY?**

18 A. SCE&G relies primarily upon its LNG assets to fulfill the peaking needs of
19 its system and customers. Additionally, the on-system LNG service significantly
20 adds to the reliability and security of gas supply during unfavorable operating
21 conditions that may occur from time to time. For example, SCE&G's supply of gas
22 could be unexpectedly interrupted because abnormally cold weather creates a spike

1 in demand which in turn causes equipment malfunctions, well freeze-ups, and other
2 operational anomalies thereby limiting the supply of gas into South Carolina. In
3 these instances, SCE&G could employ the use of its on-system LNG facilities for a
4 limited time to offset or reduce any adverse effects caused by an upstream
5 interruption.

6 Attached hereto as Exhibit No. ____ (RMJ-3) is a comparison of SCE&G's
7 firm sales service to its capacity to deliver gas to serve firm demand. This exhibit
8 indicates that the Company will have firm assets sufficient to provide a 2.81%
9 system-wide operating reserve during the upcoming winter heating season months
10 of November and December and a 5.48% system-wide operating reserve during the
11 upcoming winter heating season months of January through March after the addition
12 of the 50,000 Dt of firm capacity on DECGT projected to be in service by December
13 23, 2017. This operating reserve is conditioned on the availability of the LNG
14 facilities.

15
16 **Q. WHY IS THE SEGMENTED DECGT INTERSTATE CAPACITY NOT**
17 **INCLUDED IN THE CALCULATION OF THE SYSTEM-WIDE**
18 **OPERATING RESERVE FOR THE MONTHS OF JANUARY THROUGH**
19 **MARCH ON EXHIBIT NO. ____ (RMJ-3)?**

20 A. SCE&G did not include the 40,000 Dt of Segmented DECGT Interstate
21 Capacity in the calculation of the system-wide operating reserve for the months of
22 January through March on Exhibit No. ____ (RMJ-3) because it is unclear how the

1 addition of the 50,000 Dt of firm capacity on DECGT projected to be in service in
2 late December 2017 will affect the ability to segment capacity and how much, if
3 any, segmented capacity will be available to SCE&G.
4

5 **Q. DO YOU ANTICIPATE ADDITIONAL INTERSTATE CAPACITY NEEDS**
6 **IN THE NEAR FUTURE?**

7 A. Yes. SCE&G will require additional interstate pipeline capacity in order to
8 meet future design day forecasts as a result of (1) demand growth on its system for
9 natural gas and (2) the inability to rely on segmentation between certain
10 geographical regions, or area points, to the degree it has in the past.

11 The three interstate natural gas pipelines that serve SCE&G have indicated
12 that, based on current contracts, they are fully subscribed. Typically, interstate
13 pipelines are designed with little to no unsubscribed capacity therefore requiring
14 advance notice to build facilities for additional natural gas throughput. As such,
15 SCE&G continues to evaluate new interstate projects available in the marketplace
16 and to seek opportunities to participate in larger interstate pipeline projects which
17 may provide a benefit due to the economies of scale associated with such future
18 projects.
19
20
21

1 Q. WHY IS SCE&G UNABLE TO CONTINUE TO RELY ON
2 SEGMENTATION TO THE DEGREE IT HAS IN THE PAST?

3 A. SCE&G will no longer have the flexibility to rely on segmentation to meet
4 design day needs between area points to the degree it has in the past due to more
5 businesses subscribing to the DECGT pipeline to serve increased firm demand on
6 the DECGT system. Historically, SCE&G has reviewed its firm capacity needs on
7 a system-wide basis and relied on segmentation to meet design day needs between
8 area points. However, as its ability to rely on segmentation decreases, SCE&G will
9 be required to look at its system growth in more detail by area points rather than on
10 a system-wide basis in order to determine where new facilities will need to be
11 constructed and to contract for any necessary additional firm transportation by area
12 points. As such, SCE&G has executed a precedent agreement with DECGT
13 pursuant to which SCE&G will subscribe to 30,000 Dt per day of firm capacity in
14 the Columbia area point, 5,000 Dt per day of firm capacity in the Sumter area point,
15 and 15,000 Dt per day of firm capacity in the Charleston area point. DECGT has
16 informed SCE&G that its projected in-service date for this firm capacity is
17 December 23, 2017. Until DECGT completes construction on this project, SCE&G
18 plans to utilize segmentation and shared capacity to meet its projected design day
19 needs.

20 Additionally, as reported in Docket No. 2016-5-G, SCE&G contracted with
21 DECGT for 12,000 Dt per day of firm capacity—1,000 Dts per day of firm capacity

1 in the Riverneck Road area point and 11,000 Dts per day of firm capacity in the
2 Columbia area point—which began on November 1, 2016.

3
4 **Q. HOW DOES SCE&G UTILIZE ITS COMBINED INTERSTATE STORAGE**
5 **AND ON-SYSTEM LNG TO ENSURE RELIABLE GAS SERVICE?**

6 A. There are two dimensions to storage services: peak capability and duration.
7 SCE&G uses its storage to address both of these dimensions. Certain storage
8 services are designed to meet spikes in demand on very cold days but only for a
9 short period of time. The storage services in SCE&G's portfolio of this type include
10 Transco LNG Storage Service and both the Bushy Park and Salley LNG facilities
11 located on SCE&G's system. Accordingly, these storage services provide SCE&G
12 with system reliability and peaking capability.

13 Other storage services are geared toward meeting demand over more of the
14 winter period and not only on the coldest days. As set forth in Exhibit No. ____
15 (RMJ-2), the storage services in SCE&G's portfolio of this type include Transco
16 Washington Storage Service ("WSS"), Transco Eminence Storage Service ("ESS"),
17 Transco General Storage Service ("GSS") and Southern's Contract Storage Service
18 ("CSS"). Therefore, these storage services provide SCE&G with duration
19 capability. Through the active management of these assets, SCE&G is able to meet
20 the needs of its firm customers on the coldest days of the winter and over the entire
21 winter.

1 **Q. PLEASE DESCRIBE THE CONSIDERATIONS EVALUATED BY SCE&G**
2 **IN ASSEMBLING ITS GAS SUPPLY PORTFOLIO.**

3 A. The Company's evaluations for assembling its gas supply portfolio include
4 reviewing the gas supply, storage, transportation, and other assets already under
5 contract. Other considerations include such things as geographical delivery
6 limitations, maximum volumes, storage ratchets, and the cost of the various
7 services. SCE&G then compares the resources against the firm demand under
8 varying weather conditions. Finally, the Company determines whether additional
9 resources are required to serve the firm demand.

10
11 **Q. PLEASE DESCRIBE THE USE OF EACH OF THESE VARIOUS**
12 **SERVICES WITHIN THE PORTFOLIO.**

13 A. SCE&G places different levels of reliance on its various supply sources
14 based on the time of year in question. Decisions related to the purchase of gas
15 supply are based upon the best information available to SCE&G at the time of
16 execution. During the winter heating season, the Company uses its wellhead gas as
17 its principal supply, followed by the use of its natural gas supply stored in
18 underground storage facilities. SCE&G primarily uses its on-system LNG to meet
19 the last increment of demand on the coldest days or hours of the year.

20 As the winter progresses, this order of usage may be modified. For example,
21 if South Carolina experiences mild weather during the early part of the winter and

1 storage inventories are relatively high, then underground storage and LNG
2 withdrawals may be used instead of wellhead supply.

3
4 **II. NATURAL GAS MARKET**

5 **Q. PLEASE DISCUSS THE STATE OF THE NATURAL GAS MARKET**
6 **DURING THE REVIEW PERIOD.**

7 A. Domestic natural gas supply continues to be the lowest priced and most
8 abundant supply in the global natural gas market primarily due to domestic shale
9 production. However, the cost of building new interstate pipeline infrastructure to
10 move shale production continues to rise due to the amount of greenfield pipeline
11 required to move supply from areas in the Northeast such as Marcellus and Utica to
12 market. Interstate pipeline flows are also changing direction. Historically, interstate
13 pipelines have moved gas from the Gulf of Mexico to the Northeast. Developed,
14 current and proposed pipeline projects are reversing the flow to move gas from
15 North to South. Further, the construction timeline to build interstate pipeline
16 capacity is increasing due to more scrutiny from regulators, special interest groups
17 and the public. New capacity projects are estimated to take four (4) years or more
18 before they can be placed into service.

19 Regarding natural gas prices, the market began the Review Period in the low
20 \$2.80's per Dt. High national storage levels were offset by news of production
21 declines resulting in a fluctuating market with prices first moving lower to the \$2.50
22 per Dt range before increasing to the \$3.40's only to drop back to the \$2.50's by

1 early November. Due to a cool start to the winter season and large storage
2 withdrawals in December prices moved up to nearly \$4.00 per Dt. However, during
3 the second week of January, the weather shifted to above-normal temperatures, and
4 the market retreated to the \$2.50's per Dt by late February. For the remainder of
5 the Review Period, prices primarily ranged from \$2.75 to \$3.30 per Dt, with the
6 Review Period ending at the low end of the range at \$2.79 per Dt.

7
8 **Q. PLEASE DESCRIBE THE TOOLS THAT THE COMPANY UTILIZES TO**
9 **MITIGATE PRICE VOLATILITY TO ITS CUSTOMERS.**

10 A. The Company relies on the approved 12-month rolling purchased gas
11 adjustment mechanism, as described in more detail by Company Witness Robinson,
12 and physical gas storage to mitigate price volatility to its customers.

13
14 **III. COMPANY REQUESTS**

15 **Q. IN REGARD TO THE COMPANY'S PURCHASING PRACTICES, WHAT**
16 **ARE YOU REQUESTING OF THE COMMISSION IN THIS**
17 **PROCEEDING?**

18 A. During the Review Period, SCE&G contracted for sufficient supplies of natural
19 gas and provided reliable service to its customers. SCE&G also adequately maintained
20 gas, storage, and transportation assets for its system during the Review Period at levels
21 that were prudent and reasonably met the reliability and service needs of the system.
22 It is my opinion that SCE&G's acquisition and management of these assets during the

1 Review Period has been prudent and reasonable. Therefore, I respectfully request the
2 Commission find that SCE&G's cost for gas purchases and asset management were
3 reasonable and prudent for the Review Period.

4
5 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

6 **A. Yes.**

South Carolina Electric & Gas Company
Existing Firm Transportation Contracts

Corrected Exhibit No. ____ (RMJ-1)

		Maximum Firm Transportation Dt/Day	Expiration Date
Southern			
FSNG349 FT	Firm Transportation	44,078	August 31, 2018
FSNG349 FTNN	Firm Transportation	80,472	August 31, 2018
FSNG349 FT	Firm Transportation	36,594	August 31, 2018
		<u>161,144</u>	
Transco			
Z1 - Z5	Firm Transportation	3,209	December 30, 2020
Z2 - Z5	Firm Transportation	4,720	December 30, 2020
Z3 - Z5	Firm Transportation	3,587	December 30, 2020
Z3 - Z5	Firm Transportation	7,360	December 30, 2020
	Firm Transportation	5,806	March 31, 2084
Station 65 (Sunbelt)	Firm Transportation	39,606	October 31, 2019
Station 85 (Sunbelt)	Firm Transportation	6,170	October 31, 2019
		<u>70,458</u>	
Dominion Energy Carolina Gas			
Transmission (DECGT)	Firm Transportation	1,500	April 30, 2028
	Firm Transportation	7,500	October 31, 2026
	Firm Transportation	12,000	October 31, 2036
	Firm Transportation	27,000	October 31, 2023
	Firm Transportation ⁽¹⁾	50,000	
	Firm Transportation	296,929	October 31, 2021
		<u>394,929</u>	

⁽¹⁾ The projected In-Service Date is December 23, 2017; the Expiration Date will be 20 years from the actual in-service date.

Note: The Transco and Southern systems interconnect with the DECGT system at a number of metering stations. Supply transported using the firm capacity contracted for the Southern and Transco systems are, in most instances, delivered to SCE&G's 96 delivery points by DECGT. Thus, firm transportation capacity on the Transco and Southern systems cannot be aggregated with the firm transportation capacity on DECGT to reflect accurately the firm transportation capacity available to deliver gas to SCE&G's customers.

Exhibit No. ____ (RMJ-2)

INTERSTATE STORAGE AND LNG STORAGE

I. Interstate Storage

<u>Pipeline</u>	<u>Type</u>	<u>Maximum Storage Quantity</u>	<u>Maximum Daily Withdrawal Quantity</u>	<u>Contract Expiration Date</u>
Southern	CSS	4,908,848	99,121	August 31, 2018
Transco	ESS	115,846	13,854	September 30, 2029
Transco	GSS	26,366	503	March 31, 2023
Transco	WSS	447,938	4,715	March 31, 2019
Transco	LNG	3,585	717	October 31, 2018
Total Transco		593,735	19,789	
Total Interstate		5,502,583	118,910	

II. SCE&G On-System LNG (in mcf)

SCE&G	LNGS	1,880,000	105,000
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Note: All values are stated in Dt, unless otherwise noted

Exhibit No. ____ (RMJ-3)

South Carolina Electric & Gas Company
Available System Wide Capacity to Serve Firm Sales Service Demand

	2017-18 Winter Reserve Capacity (Dt) Nov-Dec	2017-18 Winter Reserve Capacity (Dt) Jan - Mar
DECGT Firm Interstate Capacity	344,929	394,929 ⁽¹⁾
Segmented DECGT Interstate Capacity ⁽²⁾	40,000	-
Total Capacity to Deliver Gas to SCE&G via DECGT	384,929	394,929
 SCE&G's Peak Design Day Demand (Firm Sales Service to Customers)	 407,191	 407,191
Less: Direct Connect Firm Sales Service Customers	32,772	32,772
Net SCE&G Firm Sales Service Customers behind DECGT	374,419	374,419
 Reserve dts	 10,510	 20,510
 Reserve %	 2.81%	 5.48%

⁽¹⁾ Includes 50,000 Dts of the DECGT Project with anticipated In-Service Date of December 23, 2017

⁽²⁾ Segmented Capacity utilizes existing Firm DECGT capacity at no additional demand cost.

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2 A. SCE&G owns and operates two LNG facilities: one at Bushy Park near
3 Charleston which can liquefy and store up to 980 million cubic feet ("Mmcf") of
4 LNG, and the other at Salley in Orangeburg County, which can store up to 900
5 Mmcf of trucked-in LNG. LNG must be transported to Salley via truck because
6 Salley has no liquefaction facilities.

7
8 **Q. AT WHAT VAPORIZATION RATE CAN SCE&G USE THESE**
9 **FACILITIES?**

10 A. The combined storage capability of these facilities allows our system
11 throughput planning to assume a maximum daily withdrawal quantity of 105
12 Mmcf/day. For example, assuming that storage volumes are at maximum capacity,
13 Bushy Park's inventory would be exhausted in approximately 16 days if operated at a
14 withdrawal rate of 60 Mmcf/day, and Salley's inventory would be exhausted in
15 approximately 20 days if operated at a withdrawal rate of 45 Mmcf/day.

16
17 **Q. WHAT BENEFIT DO THESE LNG ASSETS PROVIDE THE COMPANY?**

18 A. SCE&G relies primarily upon its LNG assets to fulfill the peaking needs of
19 its system and customers. Additionally, the on-system LNG service significantly
20 adds to the reliability and security of gas supply during unfavorable operating
21 conditions that may occur from time to time. For example, SCE&G's supply of gas
22 could be unexpectedly interrupted because abnormally cold weather creates a spike

1 in demand which in turn causes equipment malfunctions, well freeze-ups, and other
2 operational anomalies thereby limiting the supply of gas into South Carolina. In
3 these instances, SCE&G could employ the use of its on-system LNG facilities for a
4 limited time to offset or reduce any adverse effects caused by an upstream
5 interruption.

6 Attached hereto as Exhibit No. ____ (RMJ-3) is a comparison of SCE&G's
7 firm sales service to its capacity to deliver gas to serve firm demand. This exhibit
8 indicates that the Company will have firm assets sufficient to provide a 2.81%
9 system-wide operating reserve during the upcoming winter heating season months
10 of November and December and a 5.48% system-wide operating reserve during the
11 upcoming winter heating season months of January through March after the addition
12 of the 50,000 Dt of firm capacity on DECGT projected to be in service by December
13 23, 2017. This operating reserve is conditioned on the availability of the LNG
14 facilities.

15
16 **Q. WHY IS THE SEGMENTED DECGT INTERSTATE CAPACITY NOT**
17 **INCLUDED IN THE CALCULATION OF THE SYSTEM-WIDE**
18 **OPERATING RESERVE FOR THE MONTHS OF JANUARY THROUGH**
19 **MARCH ON EXHIBIT NO. ____ (RMJ-3)?**

20 **A.** SCE&G did not include the 40,000 Dt of Segmented DECGT Interstate
21 Capacity in the calculation of the system-wide operating reserve for the months of
22 January through March on Exhibit No. ____ (RMJ-3) because it is unclear how the

1 addition of the 50,000 Dt of firm capacity on DECGT projected to be in service in
2 late December 2017 will affect the ability to segment capacity and how much, if
3 any, segmented capacity will be available to SCE&G.
4

5 **Q. DO YOU ANTICIPATE ADDITIONAL INTERSTATE CAPACITY NEEDS**
6 **IN THE NEAR FUTURE?**

7 A. Yes. SCE&G will require additional interstate pipeline capacity in order to
8 meet future design day forecasts as a result of (1) demand growth on its system for
9 natural gas and (2) the inability to rely on segmentation between certain
10 geographical regions, or area points, to the degree it has in the past.

11 The three interstate natural gas pipelines that serve SCE&G have indicated
12 that, based on current contracts, they are fully subscribed. Typically, interstate
13 pipelines are designed with little to no unsubscribed capacity therefore requiring
14 advance notice to build facilities for additional natural gas throughput. As such,
15 SCE&G continues to evaluate new interstate projects available in the marketplace
16 and to seek opportunities to participate in larger interstate pipeline projects which
17 may provide a benefit due to the economies of scale associated with such future
18 projects.
19
20
21

1 **Q. WHY IS SCE&G UNABLE TO CONTINUE TO RELY ON**
2 **SEGMENTATION TO THE DEGREE IT HAS IN THE PAST?**

3 A. SCE&G will no longer have the flexibility to rely on segmentation to meet
4 design day needs between area points to the degree it has in the past due to more
5 businesses subscribing to the DECGT pipeline to serve increased firm demand on
6 the DECGT system. Historically, SCE&G has reviewed its firm capacity needs on
7 a system-wide basis and relied on segmentation to meet design day needs between
8 area points. However, as its ability to rely on segmentation decreases, SCE&G will
9 be required to look at its system growth in more detail by area points rather than on
10 a system-wide basis in order to determine where new facilities will need to be
11 constructed and to contract for any necessary additional firm transportation by area
12 points. As such, SCE&G has executed a precedent agreement with DECGT
13 pursuant to which SCE&G will subscribe to 30,000 Dt per day of firm capacity in
14 the Columbia area point, 5,000 Dt per day of firm capacity in the Sumter area point,
15 and 15,000 Dt per day of firm capacity in the Charleston area point. DECGT has
16 informed SCE&G that its projected in-service date for this firm capacity is
17 December 23, 2017. Until DECGT completes construction on this project, SCE&G
18 plans to utilize segmentation and shared capacity to meet its projected design day
19 needs.

20 Additionally, as reported in Docket No. 2016-5-G, SCE&G contracted with
21 DECGT for 12,000 Dt per day of firm capacity—1,000 Dts per day of firm capacity

1 in the Riverneck Road area point and 11,000 Dts per day of firm capacity in the
2 Columbia area point—which began on November 1, 2016.

3
4 **Q. HOW DOES SCE&G UTILIZE ITS COMBINED INTERSTATE STORAGE**
5 **AND ON-SYSTEM LNG TO ENSURE RELIABLE GAS SERVICE?**

6 A. There are two dimensions to storage services: peak capability and duration.
7 SCE&G uses its storage to address both of these dimensions. Certain storage
8 services are designed to meet spikes in demand on very cold days but only for a
9 short period of time. The storage services in SCE&G's portfolio of this type include
10 Transco LNG Storage Service and both the Bushy Park and Salley LNG facilities
11 located on SCE&G's system. Accordingly, these storage services provide SCE&G
12 with system reliability and peaking capability.

13 Other storage services are geared toward meeting demand over more of the
14 winter period and not only on the coldest days. As set forth in Exhibit No. ____
15 (RMJ-2), the storage services in SCE&G's portfolio of this type include Transco
16 Washington Storage Service ("WSS"), Transco Eminence Storage Service ("ESS"),
17 Transco General Storage Service ("GSS") and Southern's Contract Storage Service
18 ("CSS"). Therefore, these storage services provide SCE&G with duration
19 capability. Through the active management of these assets, SCE&G is able to meet
20 the needs of its firm customers on the coldest days of the winter and over the entire
21 winter.
22

1 **Q. PLEASE DESCRIBE THE CONSIDERATIONS EVALUATED BY SCE&G**
2 **IN ASSEMBLING ITS GAS SUPPLY PORTFOLIO.**

3 A. The Company's evaluations for assembling its gas supply portfolio include
4 reviewing the gas supply, storage, transportation, and other assets already under
5 contract. Other considerations include such things as geographical delivery
6 limitations, maximum volumes, storage ratchets, and the cost of the various
7 services. SCE&G then compares the resources against the firm demand under
8 varying weather conditions. Finally, the Company determines whether additional
9 resources are required to serve the firm demand.

10
11 **Q. PLEASE DESCRIBE THE USE OF EACH OF THESE VARIOUS**
12 **SERVICES WITHIN THE PORTFOLIO.**

13 A. SCE&G places different levels of reliance on its various supply sources
14 based on the time of year in question. Decisions related to the purchase of gas
15 supply are based upon the best information available to SCE&G at the time of
16 execution. During the winter heating season, the Company uses its wellhead gas as
17 its principal supply, followed by the use of its natural gas supply stored in
18 underground storage facilities. SCE&G primarily uses its on-system LNG to meet
19 the last increment of demand on the coldest days or hours of the year.

20 As the winter progresses, this order of usage may be modified. For example,
21 if South Carolina experiences mild weather during the early part of the winter and

1 storage inventories are relatively high, then underground storage and LNG
2 withdrawals may be used instead of wellhead supply.

3
4 **II. NATURAL GAS MARKET**

5 **Q. PLEASE DISCUSS THE STATE OF THE NATURAL GAS MARKET**
6 **DURING THE REVIEW PERIOD.**

7 A. Domestic natural gas supply continues to be the lowest priced and most
8 abundant supply in the global natural gas market primarily due to domestic shale
9 production. However, the cost of building new interstate pipeline infrastructure to
10 move shale production continues to rise due to the amount of greenfield pipeline
11 required to move supply from areas in the Northeast such as Marcellus and Utica to
12 market. Interstate pipeline flows are also changing direction. Historically, interstate
13 pipelines have moved gas from the Gulf of Mexico to the Northeast. Developed,
14 current and proposed pipeline projects are reversing the flow to move gas from
15 North to South. Further, the construction timeline to build interstate pipeline
16 capacity is increasing due to more scrutiny from regulators, special interest groups
17 and the public. New capacity projects are estimated to take four (4) years or more
18 before they can be placed into service.

19 Regarding natural gas prices, the market began the Review Period in the low
20 \$2.80's per Dt. High national storage levels were offset by news of production
21 declines resulting in a fluctuating market with prices first moving lower to the \$2.50
22 per Dt range before increasing to the \$3.40's only to drop back to the \$2.50's by

1 early November. Due to a cool start to the winter season and large storage
2 withdrawals in December prices moved up to nearly \$4.00 per Dt. However, during
3 the second week of January, the weather shifted to above-normal temperatures, and
4 the market retreated to the \$2.50's per Dt by late February. For the remainder of
5 the Review Period, prices primarily ranged from \$2.75 to \$3.30 per Dt, with the
6 Review Period ending at the low end of the range at \$2.79 per Dt.

7
8 **Q. PLEASE DESCRIBE THE TOOLS THAT THE COMPANY UTILIZES TO**
9 **MITIGATE PRICE VOLATILITY TO ITS CUSTOMERS.**

10 A. The Company relies on the approved 12-month rolling purchased gas
11 adjustment mechanism, as described in more detail by Company Witness Robinson,
12 and physical gas storage to mitigate price volatility to its customers.

13
14 **III. COMPANY REQUESTS**

15 **Q. IN REGARD TO THE COMPANY'S PURCHASING PRACTICES, WHAT**
16 **ARE YOU REQUESTING OF THE COMMISSION IN THIS**
17 **PROCEEDING?**

18 A. During the Review Period, SCE&G contracted for sufficient supplies of natural
19 gas and provided reliable service to its customers. SCE&G also adequately maintained
20 gas, storage, and transportation assets for its system during the Review Period at levels
21 that were prudent and reasonably met the reliability and service needs of the system.
22 It is my opinion that SCE&G's acquisition and management of these assets during the

1 Review Period has been prudent and reasonable. Therefore, I respectfully request the
2 Commission find that SCE&G's cost for gas purchases and asset management were
3 reasonable and prudent for the Review Period.

4
5 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

6 **A. Yes.**

South Carolina Electric & Gas Company
Existing Firm Transportation Contracts

Corrected Exhibit No. ____ (RMJ-1)

		Maximum Firm Transportation Dt/Day	Expiration Date
Southern			
FSNG349 FT	Firm Transportation	44,078	August 31, 2018
FSNG349 FTNN	Firm Transportation	80,472	August 31, 2018
FSNG349 FT	Firm Transportation	36,594	August 31, 2018
		<u>161,144</u>	
Transco			
Z1 - Z5	Firm Transportation	3,209	December 30, 2020
Z2 - Z5	Firm Transportation	4,720	December 30, 2020
Z3 - Z5	Firm Transportation	3,587	December 30, 2020
Z3 - Z5	Firm Transportation	7,360	December 30, 2020
	Firm Transportation	5,806	March 31, 2084
Station 65 (Sunbelt)	Firm Transportation	39,606	October 31, 2019
Station 85 (Sunbelt)	Firm Transportation	6,170	October 31, 2019
		<u>70,458</u>	
Dominion Energy Carolina Gas Transmission (DECGT)			
	Firm Transportation	1,500	April 30, 2028
	Firm Transportation	7,500	October 31, 2026
	Firm Transportation	12,000	October 31, 2036
	Firm Transportation	27,000	October 31, 2023
	Firm Transportation ⁽¹⁾	50,000	
	Firm Transportation	296,929	October 31, 2021
		<u>394,929</u>	

⁽¹⁾ The projected In-Service Date is December 23, 2017; the Expiration Date will be 20 years from the actual in-service date.

Note: The Transco and Southern systems interconnect with the DECGT system at a number of metering stations. Supply transported using the firm capacity contracted for the Southern and Transco systems are, in most instances, delivered to SCE&G's 96 delivery points by DECGT. Thus, firm transportation capacity on the Transco and Southern systems cannot be aggregated with the firm transportation capacity on DECGT to reflect accurately the firm transportation capacity available to deliver gas to SCE&G's customers.

Exhibit No. ____ (RMJ-2)

INTERSTATE STORAGE AND LNG STORAGE**I. Interstate Storage**

<u>Pipeline</u>	<u>Type</u>	<u>Maximum Storage Quantity</u>	<u>Maximum Daily Withdrawal Quantity</u>	<u>Contract Expiration Date</u>
Southern	CSS	4,908,848	99,121	August 31, 2018
Transco	ESS	115,846	13,854	September 30, 2029
Transco	GSS	26,366	503	March 31, 2023
Transco	WSS	447,938	4,715	March 31, 2019
Transco	LNG	3,585	717	October 31, 2018
Total Transco		593,735	19,789	
Total Interstate		5,502,583	118,910	

II. SCE&G On-System LNG (in mcf)

SCE&G	LNGS	1,880,000	105,000
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Note: All values are stated in Dt, unless otherwise noted

Exhibit No. ____ (RMJ-3)

South Carolina Electric & Gas Company
Available System Wide Capacity to Serve Firm Sales Service Demand

	2017-18 Winter Reserve Capacity (Dt) Nov-Dec	2017-18 Winter Reserve Capacity (Dt) Jan - Mar
DECGT Firm Interstate Capacity	344,929	394,929 ⁽¹⁾
Segmented DECGT Interstate Capacity ⁽²⁾	40,000	-
Total Capacity to Deliver Gas to SCE&G via DECGT	384,929	394,929
 SCE&G's Peak Design Day Demand (Firm Sales Service to Customers)	 407,191	 407,191
Less: Direct Connect Firm Sales Service Customers	32,772	32,772
Net SCE&G Firm Sales Service Customers behind DECGT	374,419	374,419
 Reserve dts	 10,510	 20,510
 Reserve %	 2.81%	 5.48%

⁽¹⁾ Includes 50,000 Dts of the DECGT Project with anticipated In-Service Date of December 23, 2017

⁽²⁾ Segmented Capacity utilizes existing Firm DECGT capacity at no additional demand cost.

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2017-5-G

IN RE:

Annual Review of Purchased Gas)
Adjustment and Gas Purchasing Policies)
of South Carolina Electric & Gas Company)
_____)

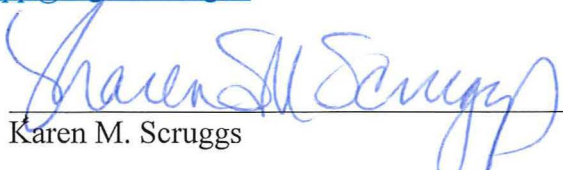
**CERTIFICATE
OF SERVICE**

This is to certify that I have caused to be served this day one (1) copy of South Carolina Electric & Gas Company's **Corrected Direct Testimony and Exhibits of Rose M. Jackson** via U.S. First Class Mail and electronic mail to the persons named below at the addresses set forth:

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Karen M. Scruggs

Cayce, South Carolina
This 30th day of October 2017